The course of the disease was the same as in the last case, but not so rapid.

A *third* case originated as the result of a gunshot wound of the left leg. Painful spasm in the left calf muscles occurred after forcible exertion. Tabetic symptoms appeared slowly.

The *fourth* case had its starting point in a fracture of both clavicles, through his horse falling upon him.

All of these cases serve to confirm the view that tabes may arise as a result of peripheric injuries.

MUSCULAR ATROPHY AND CHANGES IN ELECTRICAL REACTION OCCURRING AS A RESULT OF CEREBRAL DISEASE.

Wasting of the muscles has been frequently observed in limbs paralyzed from brain disease, and in part accounted for by the existence in the cortex of trophic centres for the muscles. Considerable diminution in the electrical irritability has also been noted in several cases of cerebral hemiplegia and hemianæsthesia. However, in no case were qualitative changes present, either in the form of alteration in the galvanic formula, or slow contraction upon faradic or galvanic excitation.

Eisenlohr (Neurologisches Centralblatt, 1890, No. 1) reports a number of observations with autopsies bearing upon this point.

The *first case* was a female with aphasia, reported in the Deutsch. Med. Wochenschrift, 1889. In this instance there was atrophy of the small muscles of the right hand. There were also well-marked slow contractions in the abductor minimi digiti to cathodic closure and anodic closure. The autopsy revealed two abscesses about the size of a walnut in the left cerebral hemisphere. One was situated in the posterior part of the caudate nucleus, encroaching upon adjacent portions of the lenticular nucleus, corona radiata and internal capsule, and the other within the tegmentum of the crus in the subthalamic region and the posterior part of the optic thalamus. There was moderate secondary degeneration in the left pyramid and in the right lateral column of the cord. The anterior horns in the cervical and upper dorsal region were perfectly normal.

The *second case* occurred in a coppersmith twenty-one years of age, with epileptiform convulsions and weakness of the right hand, which ultimately advanced to paralysis of the extensors, paresis of the flexors and flaccidity of the muscles of the arm and forearm.

Upon electrical examination it was discovered that An CC was slower than normal in the right thenar and hypothenar group. As the disease advanced, convulsions occurred in the right arm, and subsequently the facial nerve and right leg became involved.

The faradic reaction was found diminished in the ball of the thumb and in the interossei. There was increased galvanic excitability in the first interosseus (active contraction), and in the thenar group changes in the character of the contractions were noted, *i. e.*, tonic contraction with An > C Ca C. The diagnosis was made of an abscess in the middle portion of a central convolution in the left hemisphere. Two unsuccessful attempts were made to evacuate the abscess.

The autopsy showed an abscess about the size of an apple in the left pre-central convolution. The microscopical examination of the hardened cord gave an absolutely negative result. No pathological changes were found in the ulnar nerve or affected muscles. It is worthy of note, that in both of these cases the anterior gray matter was found intact.* In the second case neither the pyramidal tract nor the anterior roots were involved. Babinski assumed the existence of a " dynamic lesion " of the anterior ganglion cells in three similar cases of muscular atrophy from cerebral paralysis. Eisenlohr does not concur in this opinion, and is unwilling to class these galvanic changes with the genuine R.D. But he inclines to the belief that the trophic influences originating in certain portions of the brain can manifest themselves in a peculiar change in the muscular contractility, which, in its turn, causes special electrical reactions without any tangible histological changes taking place.

In a *third case*, in which a large area of softening was supposed to be present in the right hemisphere, there was decided diminution of the direct faradic reaction in several small muscles of the hand, and slighter in the arm, forearm and thigh muscles. In addition there were indications of qualitative changes upon direct faradic and galvanic excitation in several muscles of the hand (thenar, hypothenar, first interosseous), and marked diminution of nerve irritability in the paralyzed left upper extremity, in conjunction with conspicuous atrophy of numerous muscles and groups of muscles.

In a later stage several muscle groups in the hand and leg upon the healthy side showed beginning wasting. Eisenlohr believes that here we must assume the existence of either a trophic influence passing from the cerebral centres of the right hemisphere to the musculature of the body on the same side, or the extension of a secondary degeneration of the direct and crossed pyramidal tracts into the gray substance of both anterior horns. Perhaps the atrophy from disuse may help to explain why the small muscles of the hand are so frequently affected.

GLOSSO-LABIAL-LARYNGEAL PARALYSIS.

In the Gaz. des hopitaux, 1889, No. 141, Moty reports the history of three cases of bulbar paralysis whose etiology is deserving of attention and consideration. All of those affected were members of one and the same family, whose parents were first cousins on the paternal side. The parents were in good health. Among others of the family several marriages of blood-relations had taken place, without any apparent ill effect upon their progeny. In the above-mentioned family there were eleven children. The eldest was twenty-seven years of age, in good health, married, and the mother of two living children. The second child, also a daughter, twenty-five years of age, was healthy until her eighth year, when the symptoms of bulbar paralysis began. In the third daughter, twenty-three years old, the disease began to develop itself at the seventh year. The fourth child, a son of twenty-seven years, was healthy at birth, but through a fall in his first year he received a dislocation of the right thigh. The first signs of the disease appeared likewise in the seventh year. The fifth child is a son nineteen years of age. Three years ago he acquired a tuberculous ostitis in one of the thighs. The sixth, seventh, eighth and ninth children were boys. The tenth and eleventh were girls. The last one was born five years ago. The author, who doubts the legitimacy of the first child, calls attention to the fact that the disease affected the eldest three legitimate children, and according to the general laws of heredity, the first children suffered most from hereditary influences. Besides the relationship of the parents, there was also the pernicious influence of alcoholic excesses.

RELIEF FROM A GRAVE TYPE OF EPILEPSY FOLLOWING THE CORRECTION OF AN EXAGGERATED CONVERGENT STRABISMUS.

Dr. Chas. H. Beard (Archives of Ophthalmology, Apr. and July, 1890), reports the case of a German barber fifty-two years of age, who suffered from excruciating pain in